but a partial reduction of the swelling, I have speedily succeeded in completing the cure with this remedy. The cerate prepared as before directed, is best adapted to this purpose. An an *antipsoraic*, it has been used in many cutaneous affections, with much authority in its favour. Of its value in this class of diseases I can say nothing from my own experience. Salt rheum, (var. of ecpyesis impetigo of Good,) scalled head, (E. porrigo,) itch, (E. scabies,) are the forms of cutaneous diseases in which it has been more particularly recommended.

March, 1835.

ART. III. *Reports of Cases Treated in the Surgical Wards of the Pennsylvania Hospital.* By T. S. KIRKBRIDE, M. D. Late Resident Physician.

CASE I. *Injury of the Head—Insensibility—Convulsions—Hæmorrhage from the Ears—Convulsive Motion of the Ball of the Eye—Double Vision—Entire Deafness.*—John H. æt. 27, hack driver, of rather intemperate habits, but generally enjoying good health, was brought to the hospital on the 6th of January, 1835, at 8, P. M. He was reported to have been sitting on the box of his carriage, and to have fallen from it without any obvious cause, about one hour before. He had continued perfectly insensible after the accident, and when admitted presented the following symptoms:—Skin cool; pulse 88, feeble, irregular; respiration 26, slightly stertorous; pupils nearly natural, little sensibility to light; he moves his limbs when strong irritants are applied to them, and appears annoyed when his arms or legs are moved; he has not spoken, or opened his eyes since the accident. Blood has been discharged from his ears and nose; no wound of the scalp, or any fissure or depression discovered in the skull. Stimulating enemata. Sinapisms to the extremities; heat and frictions.

January 7th.—Morning. Reäction came on very slowly. At midnight he vomited his last dinner, consisting of undigested meat and vegetables, and has vomited once since. At 4, A. M. he asked for drink; he was restless, and roused with difficulty, and although he now asks a few questions, no replies can be obtained from him; his skin is hot; pulse 88, some strength; face flushed; pupils natural, conjunctiva slightly injected. V. S. ℥xviij. R. Calomel, gr. x. statim. *Evening.* After the bleeding his pulse fell to 70, and be-

came weak; he rejected the calomel, and ol. tiglii, gtt. j. q. 3 h. was directed to be taken, till his bowels were freely purged. At 2, P. M he had a convulsion, and at four, another, each of which lasted about a minute. During these convulsions he had some frothing at the mouth, which was drawn slightly to the left side, and stertorous breathing; the eyes were observed to be rolled rapidly and repeatedly in different directions, as if from the convulsive action of all the muscles of the eye-ball; pupils a little dilated; skin warm. During the attacks of vomiting and in the convulsions, blood was discharged from the right ear. At 10, P. M. there was slight rigidity of the left arm; the left eye was drawn to the internal, and the right to the external canthus; no distortion of the face; convulsions occur about once every hour; pupils more dilated; pulse 94, irregular, intermits every sixth beat; respiration inclined to stertor; restlessness. ℞. Antim. tart. gr. ij.; Aquæ, ℥vj. ft. sol. S. ℥ss. every hour. Continue ice to head. Low diet.

8*th.* Had convulsions during the night, and one this morning; vomited after taking drink in the night, none since 6, A. M.; does not speak, except in demanding drink; his sensibility is good, but he evidently is unable to hear; pulse 88, slight irregularity, no intermission, soft; respiration more natural; pupils not dilated; dozes immediately after he is examined. ℞. Calomel, gr. x. to be followed by enemata. Take ℥x. of blood from the head by cups. Continue cold and sol. antim. tart.

9*th.* No convulsion since last report; he is generally dozing; expresses his wants; skin cool, except of head, which is hot; pupils natural; tongue dry, swollen, (from an injury received in his fall,) covered with a whitish coat; gums covered with mucus; pulse 60, soft, regular, rather weak. Continue treatment.

10*th.* More rational; entirely deaf, but answers written questions; slept well during the night, pulse 56, soft, regular; tongue moist, cleaning; bowels open four times since last evening.

13*th.* Intelligence good; pulse 60, regular; tongue moist; head rather warm; complains of "sounds in his head;" deafness continues.

17*th.* The patient states that for four days past, he has had double vision, the second object always appearing below the true one; to produce this, requires the object to be at a little distance, not less than five feet, and excepting at first, a strong light directed upon it, in a dull light, his vision was always better. Pulse keeps at 68, soft, regular; pupils natural, but the eye has rather a bright appearance. He has a purulent discharge from the right ear. He has been cupped and purged since last report.

24th. Complains of the sounds in his head as being very annoying and variable; no head-ache; sleeps well; objects at a little distance still appear double. Treatment continued.

February 10th.—Complains of weakness. and the sounds in his ears, which vary daily; his vision is natural; no pain in head; slight discharge from the right ear only; pulse 64, rather weak; tongue moist, pale; bowels kept open by occasional purges; has taken no other medicine for several days. His diet chicken water, and bread and tea.

March 29th.—No improvement in the patient's hearing; has slight pain in his head at times; in reading he holds his book at about double the usual distance; less "noise in the head" than at last report; no discharge from the ears; pulse 80, soft and regular; bowels regular; sleeps well; has been walking about for a couple of weeks past. During the last fortnight he has taken mass. ex. hydrarg. gr. iij. every night, and had moxa applied behind the ears.

Observations.—This case still remains in the hospital, (June 6th,) the patient enjoys good health, but is quite deaf; has slight head-ache at times, and is exceedingly annoyed by the different sounds in his head, which have been of almost every possible variety. The remedies administered have had little effect upon these symptoms. It is hardly possible to say what the precise injury has been, but effusion or fracture at the base of the brain or injury of its substance is most likely to have occurred.

Among the early and urgent symptoms which render the case peculiarly interesting, are the insensibility lasting eight hours after the accident; the discharges of blood from the ear before and during the convulsions, which came on the next afternoon, and recurred at intervals for twenty hours; the distortions of the features, and the peculiar motions of the ball of the eye during these convulsions, and the entire deafness, still continuing, five months after the injury was received. He had purulent discharge from the right ear after the 11th. On the 13th, seven days after the fall, he was first annoyed by the sounds in his head, and then compared them to others that were familiar to him, one day to the rumbling of a mill, the next to the whetting of a scythe, the ringing of bells, the croaking of frogs, &c. but of late he states that although still varying in their character, they are often such as do not in the least resemble any thing he ever heard or imagined. Double vision occurred about the same time, and continued to some extent till the 10th of February.

These reports embrace but a portion of the cases of injury of the head that have been received into the hospital since their commencement; the whole number is large, as nearly all the severe acci-

dents of the kind, happening to the poorer classes in the city, are within a short time brought to the gate, where they are received at all hours and treated at the expense of the institution. It will be observed that among the cases reported, there is no one in which the trephine was used; several such have occurred, however; and we have seen recoveries after its employment, but during the last two years, not a single one has resulted favourably in which that instrument was used.

Much authority might be adduced for and against the operation, and every one admits that cases do frequently occur, where no doubt can exist as to its propriety and utility, and where no surgeon should hesitate to perform it; but, when the indications are not positive, it is to be recollected that the operation is necessarily a source of irritation of no trifling character, and may be productive of worse consequences than the injury itself. It is also very possible that recoveries have taken place after the operation, where the same result *might* have occurred without it.

We believe that most of the surgeons of extensive practice in this city, do not place great confidence in the operation, an opinion which is fully confirmed by the experience of a large majority of modern European surgeons.

It may be doubted whether practical men will agree in sentiment with a writer in a late journal, who insists that "the trephine is an instrument on which great reliance can be placed in recent injuries and collections beneath the cranium," and "the use of which ought to be extended beyond the line of its warmest advocates;" or that exploring the head by "frequent perforations" can often be justifiable. We suspect that recoveries are excessively rare every where, in those cases "where the whole upper surface of the cranium has been crushed, so that it was difficult to keep the rocking bones in juxta-position until the adhesive process commenced, and where more than one perforation was necessary to give vent to large clots of blood; and also where the dura mater has been lacerated, and considerable portions of cerebral matter had discharged."

Case II. *Compound Fracture of the Elbow Joint—Recovery with Anchylosis.*—William M. S. æt. 36, labourer, of intemperate habits, but robust, and generally enjoying good health, was admitted into the hospital on the 26th of October, 1834. In attempting to escape from the police the preceding night, he jumped from a window in the second story of his house, alighting upon his hands, and striking his head upon the side of a tub that was standing in the yard. Upon his entrance, at noon the next day, he still continued insensible; he

had a cut an inch long over one eye, and contusions upon various parts of his body; a compound and comminuted fracture of the right elbow joint, so that the finger could be introduced and moved about among the fragments. In addition, he had dislocation of the left wrist, and a fracture of the radius, near its lower extremity. His pulse was weak and frequent; skin cool; pupils slightly contracted. Sinapisms, &c. applied to his extremities, and stimulating enemata administered.

He recovered from the concussion on the following day; the elbow became very much swollen, red, and painful, with a profuse discharge of sero-purulent fluid; he had the usual symptoms of mania a potu; restlessness; inability to sleep; tremors, &c.

He was put upon the use of opium and porter, with a full and nutritious diet; the arm kept at rest by means of a rectangular splint on the upper surface, while poultices were applied to the wound on the under side.

December 3d.—The patient has suffered severely from pain and constitutional irritation; the discharge has been very copious; he has lost flesh and strength, and had fever and night sweats. The swelling of the arm has subsided within a few days, and he suffers less pain. An additional opening has formed on the upper and outer part of the elbow, from which there has been a large discharge of pus, and two or three spiculæ of bone. Treatment continued.

18th. General health improving; he is able to use the left arm with facility; no other change to note.

27th. The patient is now regaining his flesh and strength; he has a good appetite; rests well at night, and suffers but little pain; the swelling and discharge from the arm are diminishing rapidly. The fungous granulations were improved, by being sprinkled twice a day with the sulphate of morphia, and caustic has since been applied. The angle of the splint is occasionally varied as much as can be borne. He takes but gr. j. opium at night. Other treatment as before.

January 24th, 1835.—During the last two weeks the patient has been using an angular splint, by means of which he may move the part without displacing the dressings, with the view of preventing the anchylosis that must necessarily take place, from being perfect. The splint acts very well, and there is slight motion at the elbow; the ulcer is small, and discharges but a few drops of pus daily; granulations healthy.

The patient was discharged at his own request on the 14th of March; his health good, with an ulcer not larger than a pea, over the

joint; no exposed bone could be detected. He has the power of flexing and extending the arm to a very limited degree.

Case III. *Compound Fracture of the Elbow Joint—Recovery, with the Motions of the Part—Moveable Angular Splint.*—Thomas C. æt. 21, manufacturer, admitted January 18th, 1835. Not very robust, but enjoyed good health. On the morning of his admission he was assisting to drag a fire engine, and slipping on the ice, he fell directly before the wheel, which passed over the left arm, just above the elbow joint, producing a fracture, which was comminuted, and also extended down between the condyles, which, however, were only very slightly separated. The soft parts were severely contused, and one or two wounds existed in the integuments, from which there was some hæmorrhage.

Upon his entrance his skin was cool, and pulse feeble, but regular; he suffered acute pain; there was much blood effused, and the swelling was increasing. The following plan of treatment was adopted:—The forearm was flexed at a right angle with the arm, pressing together the condyles extension was made, the fractured portions brought as nearly in apposition as possible, and compresses of lint secured over the openings by adhesive plaster; a wet roller was then applied from the hand up the arm with tolerable tightness, the arm was placed upon a rectangular splint, so padded as to relieve the wounded parts from pressure, and firmly secured to it by another wet roller. Cold lotions were directed to be kept constantly applied on these bandages from the wrist to the middle of the arm.

He suffered much pain, which was relieved by opiates; the hæmorrhage continuing slightly for a few hours, impregnated the bandage, which in that part became hardened, so as to form a complete case for the elbow, and as the circulation in the hand was good, and no evidence existed of injury from the pressure, the dressings were not disturbed till the evening of the 21st. The parts then presented a very favourable appearance; the swelling had been effectually kept down, and there was but little evidence of inflammation. The same apparatus was again applied, and the same applications continued. As he had some fever, he was directed to take a solution of tart. antim. gr. one-twelfth, q. 2 h. Vegetable diet.

23*d*. Patient has more pain in the arm, and general restlessness; he had a chill this morning, which has been followed by fever; tongue brownish in centre, and inclined to dryness; pulse 100, quick; bowels not open. Increase sol. ant. tart. to one-sixth, of a grain, every two hours. Purgative enema. Poultices to the arm.

31*st*. Free suppuration has taken place in the arm, and considera-

ble sloughing of the cellular tissue; there is a subsidence of the swelling and fever. He takes mist. neutral, ℥ss. q. 2 h. Poultices continued.

February 10*th.*—Less discharge from the arm; considerable swelling about the joint; ulcerated surface on the under side of the elbow, from sloughing of the contused integuments, presents a healthy appearance; a probe passed into one of the openings, reaches the rough edges of the fracture; no union. His pulse is generally from 84 to 94, regular, a little quickness; tongue moist, reddish at the tip only; he has a little fever towards evening, and sweats at night; appetite good; bowels kept open by enemata. The limb is kept bound on a rectangular splint. Full diet.

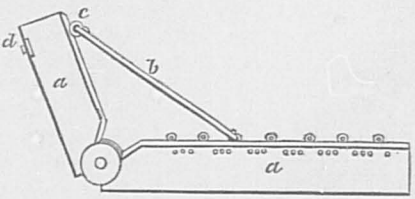
18*th.* The swelling has so much subsided, that on the 16th paste board splints were applied to the inner, outer, and upper sides of the arm, the lower being occupied by the upper portion of the rectangular splint; union appears to be commencing. The patient sits up in bed, and is gaining strength with a gradual diminution of the discharge from his arm.

20*th.* As ossification has now fairly commenced, I to-day applied the moveable angular splint, by means of which he is directed to use passive motion frequently throughout the day.

March 14*th.*—The splint has been constantly employed up to the present time, and with very satisfactory results; the motions of the joint have increased daily, and with scarce any trouble in changing the apparatus. As the bone has now become so firm as not to require a splint on the under side, it has been removed, that a better opportunity may be had of exercising the rotatory powers of the arm. The ulcer on the elbow is healed. The patient's general health is good.

28*th.* Discharged. He now has nearly all the natural motions of the arm, that of rotation being the most defective. The swelling of the joint has subsided, and he is able to lift moderate weights.

Observations. The splint spoken of in the two last cases, is one which the writer has used in several instances in the hospital, with very satisfactory results. It is represented in the annexed cut.



a a. The splint connected together by a circular joint, and having eyes on the inner edge, two inches apart, and holes through the splint at graduated distances between them.
c. A swivel eye, passing through the upper part of the splint, and rivited at *d.*
b. A wire fastened to the swivel *c*, and bent at right angles at its other extremity; of a size to fit the eyes and holes in the splint.

A bandage two inches wide is usually

employed, so that the eyes are always accessible, and to use the holes, (all placed on the same line,) only requires the bandage to be perforated by an instrument of corresponding size.

It is well calculated for all those injuries about the elbow joint, that require passive motion, or a frequent change of position, as fulfilling the indication much better than the splints generally used, and at the same time saving the surgeon much trouble. It is simplifying the apparatus of the practitioner, as it is calculated for either arm, and is a complete substitute for a number of splints, with slight variations in their angles. It is easily constructed by any one; nothing more being required than the two portions of the splint, a rivet to connect them, and the brass or iron wire to form the eyes, and the rod which determines the angle.

The motion may be made as often as desired, either by an assistant, or the patient himself; in extending or flexing the limb, it is effected so gradually, that little pain need be given, and the eyes and holes placed at graduated distances, enable the surgeon to secure the limb in any position to which he has been able to bring it. The splint may be placed on the inner or outer side of the arm; may extend to the wrist, or the points of the fingers, and by having the bandage around the joint distinct from the other portions, the parts are always accessible for inspection, or the application of dressings, without any risk of displacement.

The first of the two cases of compound fracture reported above, was so extensive an injury, and the bones entering into the composition of the joint so completely broken up, that a more favourable result than anchylosis could hardly have been anticipated; indeed, his intemperate habits, his liability to mania a potu, and the probability of his having severe constitutional symptoms, might have been strongly urged against the attempt to save the limb. The motion might perhaps have been a little increased by an earlier application of the splint, but not possibly to any great extent.

The second case is interesting in many points of view; a compound fracture of the elbow joint, produced by the heavy weight of a fire engine, necessarily connected with extensive injury to the soft parts, was closed, and the limb firmly bandaged, the oozing of blood, moistened the bandages, and soon formed a complete case for that part of the arm, which was thus kept perfectly quiet, and protected from all external influences for upwards of three days. No unusual pain nor unpleasant symptoms occurred, and when exposed, the parts presented an unusually favourable appearance. The dressings might probably have remained advantageously a longer period. The prac-

tice has been recommended by high authority, and it may be questioned whether injury has not resulted from neglecting it in many cases of injury of the joints. If the parts can be brought into a nearly natural state of apposition, injury could hardly result from a trial of it, in the hands of a careful surgeon.

The great degree of motion, which was preserved to the limb, is mainly to be attributed to the use of the splint, that is described above, in which the efforts of his attendants were faithfully seconded by the patient. He called at my office on the 28th of May, and stated that he had been regularly engaged at his business since he left the hospital, and that he found but trifling inconvenience from the injury. There is slight deformity about the joint; the motions of flexion and extension are nearly perfect, that of rotation is less so, although sufficient for all ordinary purposes.

Case IV. *Fracture of the Scapula, with an extensive Lacerated Wound of the Glutei Muscles, &c. terminating in Death.*—John Miller, æt. 54, gardener, of intemperate habits, and rather feeble constitution, admitted on the evening of the 2d of March, 1834. He is deaf; and while walking along the track of one of the rail-roads near the city, he was run against by a locomotive engine, with such force, that he was thrown in advance of it with violence against the projecting iron rail; the ash pan of the engine, in passing over him, produced an extensive lacerated wound of the soft parts, about the nates and thigh, ten or twelve inches in length, and in some parts more than three inches deep.

He complained principally, however, at the time of his admission, of violent pain through the shoulder when pressure was made, or when the arm was moved extensively. Upon examining the parts, a fracture was detected, passing in nearly a transverse direction across the scapula, from one to one and a half inches below its spine; the fragments could be easily displaced, but returned into their natural situation when the pressure was removed. No deformity whatever was apparent in the shoulder. No apparatus was used, the arm being merely kept at rest upon a pillow. His wounds were dressed with adhesive plaster and poultices. Sloughing soon commenced, and although arrested, the ulcerated surface and loss of substance were so extensive, that his enfeebled constitution appeared incapable of repairing so serious an injury. The granulations never assumed a healthy appearance; sloughing again took place; he gradually became more feeble, and lingered till the 25th of April, when he died. For two weeks before his death, he had used the injured arm without

pain or inconvenience; the appearance of the shoulder continuing natural.

Autopsy, fifteen hours after death.—Exterior. Emaciation; the wound on the nates had extended so as to occupy a space about nine inches in diameter; the glutei muscles are exposed; a dark slough exists over the sacrum, four inches in diameter, and a much smaller one near the inferior portion of the injured or left scapula. Upon cutting down to the scapula, the seat of the fracture was at once detected. The fragment had united firmly, and a ridge of callus extended across the bone.

Brain.—No blood in longitudinal sinus. *Dura mater* not injected. *Arachnoid* contains rather more than the median quantity of serosity. *Pia mater* not injected; cortical substance of a pale gray colour in both hemispheres; medullary not injected; incision moist; consistence perfect. Ventricles containing ℥ij. of limpid serum; central parts firm and white. Cerebellum pale and firm.

Thorax.—Extensive old cellular adhesions on both sides, especially the right. *Lungs* spongy, soft throughout, no tubercles; no hepatization; very little blood. Bronchi not thickened, pale. *Heart* firm, rather smaller than the fist; left ventricle somewhat hypertrophied, three-fourths of an inch thick; valves healthy.

Stomach moderately distended, containing half a pint of greenish fluid; the mucous membrane softened in the whole of the great culde-sac; the softening is irregular, in large patches; a few bands irregularly disposed; the other coats untouched. The colour of the softened and thin parts is pale white, that of the remainder dirty ash, with a few submucous arborizations; consistence nearly natural.

Small intestine contains a yellowish liquid of the consistence of thick cream. Mucous membrane every where thin, very adherent, especially in the lower fourth, but throughout strips are raised with difficulty, and not at all towards the end; no injection. Glands of Peyer reticulated, a few dotted with gray, hardly visible. Mesenteric glands small, firm.

Large intestine containing consistent fæces. Mucous membrane pale, adherent, strips scarcely four or five lines in the middle of the canal, longer elsewhere. *Spleen* firm, brown, four inches long. *Liver* moderately gorged; two substances distinct, firm, not fatty. Gall-bladder distended. *Kidneys* firm, not granulated, smooth externally.

Case V. *Disease resulting in Destruction of the Cartilages of the Knee-joint, and requiring Amputation.*—H. M. æt. 32, admitted

December 13th, 1834; of good intelligence; very pallid aspect; a native of Switzerland; till within ten years a carpenter; was five years in the Guards of Paris; during the four years he has been in this country, he was employed as a confectioner.

Although much exposed, he has generally enjoyed good health, has never been subject to cough or glandular swellings, and knows of no cause for his present disease. It commenced seventeen months ago, with pain and swelling of the knee, which gradually increased, inducing lameness, although he still continued to work for seven months. He had blisters, mercurial plasters, and a variety of other remedies applied without advantage. When he entered, he suffered much pain, had night sweats, and was unable to sleep; his appetite was tolerable; pulse about 88, quick; three large ulcerations existed around the knee, from which pus was freely discharged; the leg could be moved so freely as to lead to the belief that the cartilages were nearly destroyed. He was placed upon a course of treatment calculated to invigorate his system, previous to the performance of an operation which there was every reason to expect would soon be imperiously demanded.

January 31*st*, 1835.—During the last two weeks, the patient has had some cough, without pain in the chest; the knee has become more swollen, and the whole thigh and the scrotum œdematous, but without any tenderness or change of colour; the circumference of the diseased limb just above the joint is nearly double that of the sound one. Amputation was performed at 11 this morning by Dr. Hewson. Owing to the extensive infiltration of the limb, so much difficulty was experienced in completely arresting the circulation, that it was deemed prudent to secure the two largest vessels, immediately after cutting through the muscles, and before sawing off the bone; he consequently lost several ounces of blood. He bore the operation well; his pulse after it 88. He took morph. sulph. gr. j. before the operation, and when placed in bed, perspired profusely for several hours.

Upon examining the limb after the operation, the cartilages were found to have entirely disappeared, excepting a very small portion on the outer edge of the tibia, and on the external condyle of the femur; the extremities of both bones were soft and covered with granulations, the abscesses below, communicated by a passage lined with a false membrane with the cavity of the joint, the whole limb was extensively infiltrated with serum, and the muscles presented a peculiarly pallid appearance.

February 3*d*.—Patient had fever the evening after the operation, for which he was directed to take mist. neutral. ℥ss. q. 2 h. To-

day he is without fever; pulse rather feeble; tongue moist, a little coated; his cough has been troublesome since the operation, and for which he takes morphia mixture. Improved diet.

6*th.* First dressings removed on the 4th, daily dressings since, but little discharge; subsidence of the œdema; about one inch at the lower point, and nearly the same at the upper edge, have united by adhesive inflammation; an abscess has formed, from which thick, healthy pus is discharged; he has much less cough; tolerable appetite; pulse 80; tongue moist. Continue good diet. R. Acid sulph. dilut. gtt. xx. ter die. R. Infus. ligni. quassiæ, ℥ij. ter die.

16*th.* The cough has been relieved by the frequent application of dry cups to the chest, and the use of morphia. He has wine in addition to a full diet; the stump is granulating finely, but owing to the retraction of the integuments, a small portion of the edge of the bone is exposed, the centre is covered with granulations. His health is much improved.

March 23*d.*—Since last report the patient has entirely recovered his good health, and has gained flesh; appetite and digestion good; sleeps well; no cough; the integuments have been brought down to cover the bone by a roller commencing near the groin, and extending downwards to the extremity of the stump; cicatrization is going on rapidly; granulations healthy.

From the date of last report, the patient continued to improve; he had no cough, nor other unpleasant symptoms; the stump became firm, without the exfoliation of any bone, and he was discharged on the 6th of May.

Case VI. *Sprain of the Wrist terminating in Caries, &c. and requiring Amputation five Years after the Original Injury.*—W. L. æt. 21, waterman, admitted December 11th, 1834. Has generally enjoyed good health. Five years ago, when chasing ducks among floating ice in the Delaware, he sprained his wrist, by attempting to force his boat over a piece with which it had come in contact; it gave him but little inconvenience at the moment, but on his return became painful, and commenced swelling. He continued to use it up to the summer of 1832, and frequently injured it slightly; during all this time the swelling never subsided, and more or less pain was always present. Until this time he had not had medical advice, but used a variety of domestic remedies, as might have been expected, without advantage. He was for a short time under treatment that year, and then had no attendant till the summer of 1834, when he had entirely lost the use of his hand, and suffered violent and deep-seated pain in it; an opening was made shortly afterwards, and the bones of the

wrist found to be extensively carious. Upon his entrance, the hand was enormously swollen, red and tender to the touch, four or five openings existed on the back of the hand, but all leading to the diseased mass. An attempt was made to save the limb by removing the diseased bone, but the caries had extended so far, and his health had suffered so much from the irritation, that amputation appeared to be the only remedy that remained, particularly as the metacarpal bones were also diseased, and as within a few days the inflammation had extended above the wrist. He was on a nourishing diet, with the use of porter and opiates.

The operation was performed by Dr. Barton, on the 25th of March, 1835, four inches above the wrist. He lost but little blood, and slept well the following night, after taking his usual opiate. He had no fever on the second day from the operation, and was gradually put upon a full diet with porter. The first dressings removed on the 28th. One-half of the whole stump united by adhesive inflammation, in the remainder there was slight retraction of the integuments, the space between which was soon filled with healthy granulations; his health began to improve at once, and he to gain flesh and strength. He was discharged on the 11th of April.

The whole hand was infiltrated with lymph and serum, several openings existed on the palmar and dorsal surface, through which protruded fungous granulations; the bones of the metacarpus and of the carpus, were extensively carious; several of the cartilages and ligaments connecting the different bones of the wrist to each other and to the forearm, were partially destroyed, leaving the ends of the bones exposed.

Case VII. *Amputation of the Hand by Machinery—no Ligatures required for the Vessels—Recovery.*—Robert R. æt. 10, admitted March 19th, 1834. He is a fine healthy boy, and has only been in the country one year; while attending to some of the machinery in one of the factories at Manayunk, his left hand was caught by a belt passing over a large drum, and drawn down forcibly to the floor, by which the hand was torn off, with a small transverse portion of the lower end of the radius; the muscles were ruptured about four inches above the wrist, and drawn out, still remaining attached by their tendons to the hand. He was brought to the hospital the same evening. There was very little hæmorrhage, and no vessel requiring the application of a ligature. As nearly enough skin remained to form a flap, it was gently drawn over the stump, and dressed as usual after an amputation. An opiate was administered, and he had a comfort-

able night, but the following afternoon had fever. ℞. Potas. nit. ℥j.; Antim. tart. gr. ss.; Aquæ, ℥iv. ft. sol. s. ℥ss. q. 2 h.

21*st.* Still has fever; but little pain in the arm; bowels not open. Directed magnes. sulph. Continue mixture.

22*d.* Dressings removed to-day; the parts are not much swollen nor inflamed; he suffers pain, but is able to sleep at night. There is redness and tenderness of the arm near the elbow, to which cold lotions are applied.

25*th.* Slight sloughing of the integuments over the stump. Simple dressings. Ol. ricini, ℥ss.

29*th.* The stump is covered with healthy granulations. A small collection of pus took place above the wrist, near the point where the muscles were ruptured; this has been evacuated and is poulticed.

April 3*d.*—Doing well in every respect; simple dressings only, and full diet. From this time nothing occurred worthy of note; the granulations occasionally requiring the sol. cup. sulph. but cicatrized perfectly, so as to leave a good stump; and he was discharged on the 11th of May.

Case VIII. *Aneurism by Anastomosis—Convenient mode of Applying the Ligature—Cure.*—Mary Ann P. a healthy child, nine months old, was brought to the hospital on the 3d of December, 1834, for the purpose of having an operation performed for an aneurism by anastomosis, which had existed on the left side of the cheek, near the angle of the mouth, since birth. When first noticed, it was about the size of a small pea, and has gradually increased up to the present time, so that it now nearly equals a small nutmeg in size. The child has at times appeared to suffer pain in the tumour, and been disposed to irritate it by rubbing. The ligature was employed by Dr. Barton for its removal, and was applied in the following manner:—A common hair lip pin was introduced through the integuments under the tumour, so that about one-half of its length projected beyond the margins; by this the tumour was elevated, and a second pin introduced under the first, and at right angles to it. A strong ligature was then applied around the base of the tumour, below the points of the pins, as firmly as possible. The child did not appear to suffer severe pain, except at the moment of tightening the ligature. On the 6th the ligature was removed, and the slough separated on the 9th, leaving an ulcerated surface, three-fourths of an inch in diameter, and of healthy appearance. Simple dressings were applied; the granulations occasionally touched with the argent. nit. and on the 3d of January, 1835, the parts had cicatrized completely.

Observations.—This mode of operating for aneurism by anastomosis, was originally employed, at least in this country, by Dr. J. R. Barton, in the child of a Mr. Kent, on the upper part of the city, on the 22d of January, 1829. The patient recovered perfectly, and the operation has since been employed in numerous instances, with entirely satisfactory results. It is not only well calculated for cases of this particular kind, but also for other tumours so situated, that the application of the knife might be inconvenient, from the dread of hæmorrhage, or when, from the shape of the tumour, the usual mode of applying a ligature would be found difficult, or even impracticable. It has the advantage over the double ligature passed through the centre of the tumour, and tied on either side; that in the latter mode of operating, bleeding may still take place from the separated surface, through which the needle was passed, and the operator is not so well able to raise the tumour and place his ligature completely under it.

Several months after the performance of his first operation, Dr. B. discovered that a nearly similar operation had been performed by Mr. Brodie, at a rather earlier period, upon a private patient, viz. on the 15th of October, 1828. She had recovered on the 27th of December, and her case was first read before the Medico-Chirurgical Society on the 27th of January, 1829, and published in their Transactions in the latter part of the same year; so that the operation of Mr. Brodie could not have been known in this country at the time Dr. Barton first employed it in this city. Such coïncidences in surgical practice are not unusual.

Case IX. *Inflammation of the Cellular Tissue about the Anus, with Profuse Discharge of Pus—Solution of Kreosote to the parts, with Iodine internally—Recovery.*—George W. æt. 24, machine maker, admitted October 14th, 1834. He has been in this country three years; has always been robust, and enjoyed good health, with the exception of a few months, a year ago, when he was afflicted with intermittent fever; from this, however, he entirely recovered. He knows of no cause for his present disease.

About the middle of July, he felt a sensation of uneasiness about the anus, that he at first attributed to hæmorrhoids, with which he had been affected for a few days, about two years ago. The pain, however, increased; the parts became hard, swollen, and red; he had a sensation of weight about the anus, with fever and loss of appetite. These symptoms increased so much, that on the fifth day he was compelled to be in bed. About four weeks from the commencement of the disease, a small opening took place along side of the anus,

from which a small portion of matter constantly oozed, and the parts gradually became softer, but with only a slight diminution of pain.

When he entered the hospital, the swelling and pain continued, but the heat was scarce more than natural; his general health had suffered; his pulse was rather feeble; he had loss of appetite, and constipated bowels.

A few days after, an opening was made by the side of the anus, at a spot where the tumour was softer than elsewhere; a small quantity only of matter was discharged at the time, but it gradually increased, so that in two days, near a pint of yellowish pus was discharged per diem; sloughing of the integuments and of the cellular tissue, extending up around the rectum, now took place, so as to form a deep, unhealthy looking ulcer, two inches in diameter. He continued in this state up to the 1st of November, at which time the prostration was still more decided; he had night sweats, &c. A probe could be passed upwards between four and five inches, but the sinus could not be traced further. No communication with the rectum was at any time detected. He had been on a generous diet, and had used tonics and other constitutional remedies, with poultices to the affected part.

He was now directed to take of Lugol's solution of iodine, gtt. vj. twice a day, and to inject a solution of kreosote, one part to eighty of water, thrice a day into the cavity. To continue his other treatment.

On the 12th of November, ten days after commencing this treatment, there was a decided improvement in the patient; his countenance became more animated, and his spirits better; his pulse less frequent; he had an increase of appetite, with a diminution of the discharge, and the granulations of the ulcer began to present a healthy appearance. The kreosote, in addition to its beneficial effect upon the granulations, destroys the fœtor effectually.

December 3d.—The improvement up to this date has been constant; the patient has gained flesh, and the discharge from being a pint, is now reduced to ℥ss. daily; his appetite and digestion are good; he has no pain, and moves his limb without inconvenience; the ulcerated surface is healthy and filling up rapidly. Treatment continued.

18th. The sinus is now small, one inch deep, near the rectum, but not communicating with it.

28th. One or two other sinuses have formed under the skin, which have been laid open, and the same application continued; the patient's health is good, and he is gaining flesh rapidly.

March 23d.—Several small sinuses have formed since the date of

last report, but none that were deep; they have been successively laid open, and two or three flaps of integument removed; the granulations have required the occasional application of nit. argent. or sol. cupri. sulph. and are now all healing. He continues the solution of iodine, (increased two weeks ago to gtt. ix. bis die;) his appetite is excellent, and he has never experienced any uneasy sensations at his stomach.

He continued to improve, and was discharged well, on the 15th of April.

Case X. *Rupture of the Bladder, Abductor Muscle, and Femoral Vein, and Partial Rupture of the Femoral Artery, without external Wound—Wasting and Deformity of the Left Arm, with an Apoplectic Cyst in the Right Side of the Brain.*—Charles L. a pedler, aged about fifty years, was brought to the hospital on the 26th of February, 1835, near midnight, having been injured by the passage of a railroad car, early in the evening, about a dozen miles from the city. The accident occurred from his stepping from a car when in motion, and falling under it; but the persons who were with him, were not able to state the precise mode in which the injury was received.

He was carried in a common wagon to the city, and upon his entrance, was scarce able to articulate; he complained, however, of severe pain; his countenance pallid, and exceedingly anxious; features contracted; surface cold; pulse scarce perceptible; slight delirium. He had a comminuted fracture of the leg, and immense swelling of the injured limb, particularly near the groin, where it had a livid aspect. The left arm was deformed, wasting of the muscles, not being more than half the size of its fellow; the hand was rigid, and drawn down upon the wrist. All the usual means of exciting reaction were resorted to without effect. Death at 3, A. M. on the 27th. We were unable to obtain any previous history of this case.

Autopsy, thirteen hours after death.—Exterior. Moderate muscular development; rigidity of the extremities; no lividity, except of the injured limb; compound fracture of both bones of the right leg, about four inches above the ankle; ecchymosis on the inner part of the thigh, and great distention from the knee, to a line extending from the upper part of the crista of the ileum to the symphysis pubis. Upon cutting through this swollen part, the abductor muscle was found ruptured, or rather crushed; immense infiltration of blood into the cellular tissue. Complete rupture of the femoral vein, three inches below Poupart's ligament; partial rupture of the femoral artery at the same point, the internal and middle coats only, being divided. The effusion into the cellular tissue extended upwards to

the line above indicated, and as discovered at a later step of the examination, the blood had passed under Poupart's ligament, and infiltrated extensively the sub-peritoneal tissue behind the bladder, &c.

Head.—Longitudinal sinus empty; arachnoid moist; ventricles contained ℥ss. of serum; the substance of the brain of a beautiful consistence; in the middle lobe of the right side was found a cavity, large enough to receive a full-sized almond, lined with a membrane, and with which the fissure of Sylvius communicated; the substance around this cavity perhaps rather firmer than elsewhere. Central parts pale, firm.

Thorax.—No adhesions; lungs grayish anteriorly, slightly gorged with blood posteriorly, permeable to the air in every part; no tubercles nor granulations; no emphysema. Bronchi pale. Heart medium size, firm; fibrous coagulum in the left ventricle; valves healthy.

Abdomen.—*Stomach* distended, contained one pint of fluid of a whitish colour and acid odour. Mucous membrane of a light straw colour, particularly in the great cul-de-sac, where there is slight softening, (post mortem;) mammillation; consistence in other parts good; strips six to eight lines.

Small intestine containing mucus only, and two living lumbricales. Mucous membrane pale, and of good consistence. Glands of Peyer developed; isolated follicles visible.

Large intestine contained a little feculent matter, was somewhat contracted. Mucous membrane of good consistence. *Spleen* medium size, bluish colour, and of good consistence. *Liver* rather small, reddish-brown colour, not fatty. Gall-bladder filled with yellowish-green bile. *Kidneys* healthy. *Bladder.* A catheter passed through the urethra, at once entered the abdominal cavity; the posterior part of the bladder being so extensively torn, that excepting a strip one and a half inches in width, it was entirely detached: the membrane was pale, and of the usual consistence.

Case XI. *Psoriasis Diffusa—Cured by Sulphur Vapour and Warm Baths.*—Thomas H. æt. 54, labourer, admitted June 28th, 1834; native of England; has been in this country three years; has always been robust, and generally enjoyed good health. His occupations have generally been active, and he never had any cutaneous disease before the present. He has had venereal several times, (the last, fifteen years ago,) but never secondary symptoms.

At Mobile in April, 1832, two months after his arrival in America, he first noticed the eruption on his arms, from which it spread consecutively to the lower extremities, the head and face. In March, 1833, it appeared on his chest, and soon after extended to almost

every portion of his body. Bateman, (Synopsis, p. 58,) describes this form as commencing like the P. *guttata*, "in the form of small, solid, red elevations, resembling flat pimples, which are soon covered with small, dry scales, and coalesce into larger patches, which are irregularly circumscribed, and exhibit a rough, red, and chappy superficies, with very slight scaliness interspersed. This surface is exceedingly tender and irritable, and is affected with a sensation of burning and intense itching, both of which are much augmented on approaching a fire, or becoming warm in bed. As the disorder proceeds, the redness increases, and the skin appears thickened, and elevated with deep intersecting lines or furrows, which contain a powdery substance, or very minute scurf. The heat and painful sensations are much aggravated by the least friction, which also produces excoriation, and multiplies the painful rhagades."

When at Mobile, he states that he made use of a solution of white and red precipitate, āā. ℥j. to a pint of vinegar, as a wash to his whole body, for six days, producing a profuse salivation, with which he was very ill for twenty days. During this period the eruption faded almost completely; but upon recovering from the salivation, it reäppeared with greater severity than ever, so that he was scarce able to attend to any business. He tried a variety of remedies without any advantage, and finally resorted to the use of lard as a local application, and a solution of sulphate of magnesia and nitrate of potash internally, from which he thought he derived some benefit.

When he entered the hospital, the eruption existed so completely over the body, that excepting a space about six inches wide on the abdomen, there was scarce a spot as large as a dollar that was not affected. The eruption was elevated, of a bright red colour; scales frequently falling off; he had pains throughout his body; head-ache; moderate appetite; a sensation of weight at the epigastrium after eating; bowels inclined to constipation.

He was placed upon a milk and vegetable diet; directed to take the sol. iodini of Lugol, gtt. viij. bis die, and to use the unguent. iodini externally. A bath at the temperature of 98° every other day.

This treatment was continued for five weeks with some advantage; the eruption became less prominent and a little thinner. All remedies were suspended for a few days, and he then commenced the use of the sulphur vapour bath every day excepting one in each week, when he took a warm bath of the same temperature as above noted. No medicine internally. Same diet continued.

December 27th.—This last treatment has been faithfully persisted in, excepting an interval at different times of about four weeks, from the apparatus requiring repairs, or from slight indisposition in the

patient. After ten days the improvement was constant and decided, so that by the 20th of November, there existed only one spot, two inches in diameter, on the side, and near twenty smaller ones on all the rest of the body. At this time, there is only that on the side, reduced to half an inch in diameter, pale, indeed, scarcely differing in appearance from the rest of the skin, which is perfectly healthy. His general health is good, and he has regained his flesh and strength. The patient was not discharged till the 8th of March, 1835, at which time he had been well for several weeks.

Case XII. *Psoriasis Palmaria—Cured by Blisters and Citrine Ointment.*—T. K. æt. 30, labourer, was admitted into the hospital under the care of Dr. Hewson, on the 21st of November, 1834. The patient is a native of Ireland, robust, and has always enjoyed good health. He never before had any cutaneous disease, and was not aware of any constitutional disturbance at the commencement of the present attack, which was eighteen months before his admission. "This variety," (of psoriasis,) says Bateman, "is an obstinate tetter confined to the palm of the hand and wrist, which are rough, hot, and itchy, of a dirty hue, and cleft by deep furrows, that bleed when the fingers are stretched. The itching is intolerable whenever the hands are exposed to heat; the palm is harsh and dry, and rhagades rapidly form."

The right hand, near the ball of the thumb, was the part first affected, it gradually spread, cracked, became painful, and was exceedingly annoying when at his work; the left was soon after attacked. Upon his entrance, the skin covering the whole palm, and the first phalanges of the fingers of the right hand, with the anterior half of the palm, and a small spot at the base of the thumb of the left, constituted the diseased portion.

The cuticle was so much thickened, that it was impossible to derive benefit from the application of blisters; he was, therefore, directed to envelope the hands in soft poultices till the hardened cuticle was removed, which was affected in about ten days. A blister was then applied, which drew well, and was dressed with the unguent. res. flav. till the irritability had sufficiently subsided to admit of the application of the citrine ointment, diluted with an equal quantity of olive oil. The quantity of oil was gradually diminished, and in one week he was able to use the strong ointment. Under this treatment he improved rapidly; the cutis became perfectly smooth, without cracks or irritation, or without any stiffness or inconvenience remaining from the disease. He continued the application till within a week of his discharge, which was on the 3d of January, 1835.

Case XIII. *Eczema Rubrum, arising from Cold—Treated by Mu-*

cilaginous Baths—Small doses of Antimony, and Lard as an Unguent.—Hugh M. æt. 27, labourer, tall, and having rather sandy hair and complexion, was admitted into the hospital under the care of Dr. Hewson, on the 18th of January, 1835. He has rarely had any serious indisposition; upwards of two years since he had venereal, with secondary symptoms; he was salivated and recovered. After this, in December, 1832, when employed in the brick yards near the city, and much exposed to cold and dampness, without previous indisposition, he had an attack of eczema, (for characteristics of disease, see Bateman's Synopsis, p. 360,) which then first made its appearance in his face, and afterwards extended to every part of the skin. It had existed two months when he entered the hospital, from which he was discharged after a residence of nine weeks, perfectly cured by a plan of treatment precisely similar to that which will be detailed hereafter, with the addition of the Syr. sarsap. comp. of which he took ℥ij. ter die, for seven weeks.

He continued well till two weeks before his second admission, when being thinly clad, he suffered from the cold in walking from Manayunk to the city, and on the second day afterwards, the disease again appeared, first on the penis, and soon became universal. Upon his admission, scales existed on every part, and were separated in large quantities in his bed; the cracks in his feet rendered walking painful; he had a discharge from around the ears; slight inflammation of the eyes; his head and body were much swollen, but when quiet he suffered but little pain. He had head-ache, but no nausea or loss of appetite; his bowels were regular, and his pulse about 126.

He was directed to take a mucilaginous bath, as warm as he could bear it, daily; to take one grain of tartrate of antimony, in a pint of barley water, every twenty-four hours, and to anoint his whole body with common lard rubbed up with water. Vegetable diet.

From the second day after commencing this treatment, an improvement was observable; large scales were rubbed from his body; his pulse became gradually less frequent, till it reached the natural standard, and the skin in every part recovered its healthy feeling and appearance so rapidly, that by the 7th of February he appeared perfectly well, and was discharged from the hospital on the 14th.

Observations.—The number of cases of disease of the skin admitted into the Pennsylvania Hospital, is much smaller than might be expected in an institution where between twelve and thirteen hundred patients are under treatment annually. The interest in the number received is much diminished from the fact, that no ward is specfically appropriated to them, and that in a majority of cases their diseases are of long standing, and have assumed an aggravated

character before application is made for their admission; they also frequently become impatient, and leave the house before the relative value of different plans of treatment, necessarily chronic in their operation, can be fairly tested. From this and other causes, many are discharged when they have been relieved, and when a longer continuance would have effected cures. The writer has reported but three cases, all of different characters, but possessing some interest. In the first case, we have an exemplification of the value of sulphur vapour baths, which have been highly recommended, and which generally prove serviceable when faithfully persevered in. I have seen this patient repeatedly since he left the house, and have always found him in good health. The second case was one of some standing and severity, and was cured in a shorter period than is usual in that variety of psoriasis. The case of eczema was cured by a simple plan of treatment, in the first instance, in fifty-six days, and in the latter when he came sooner under treatment, in twenty. He had taken mercury several weeks before his first attack, but the exposure to which he was necessarily subjected by his occupation, was believed to have been the cause of the disease. In the second instance, he had taken no mercury, and the affection was traced directly to the operation of cold.

Cases of Fracture of the Patella.—No 1. Jane M. æt. 29, admitted October 16th, 1833. In falling backwards, and making an effort to save herself, fractured the right patella. Discharged December 2d. Ligament rather more than one-fourth of an inch. She experienced much difficulty in bearing a tight bandage.

No 2. John M. æt. 61, admitted April 5th, 1834. Fracture from a fall with the knee upon the edge of a curb-stone. Entered the hospital twenty hours after the accident, with great swelling and tenderness of the part; crepitation could still be detected, and a separation of the fragments. The limb was elevated, and leeches and cold applied to the knee. He could not bear a bandage till the 27th. Discharged June 28th. No appreciable separation of the fragments; union perfect; upper part slightly depressed.

No. 3. Jane M. (No. 1,) with fracture of the other patella. Admitted April 20th, 1834. Accident produced as in the previous instance, in attempting to keep herself from falling, and making great exertion with the sound limb to save that which had been before injured. Discharged June 28th. Union ligamentous, one-eighth of an inch separation; the upper fragment a little more depressed than the inferior one.

No. 4. Jane E. æt. 52, admitted January 21st, 1835. Produced by a fall upon the knee, fracture transverse, and a smaller fragment

half an inch wide separated from the upper portion. Discharged March 21st. No separation can be detected between the upper and lower portions of the patella, except at the point where the small fragment existed, and here a line is detected; this last being a little depressed below the others.

No. 5. John M. æt. 32, admitted January 9th, 1835; fracture induced by muscular exertion in attempting to jump into a cart, by raising his body with the hands resting on the bottom of the vehicle; he was exceedingly restless, had mania a potu, and loosened the apparatus repeatedly; notwithstanding which, union took place with a separation of less than one-fourth of an inch. He insisted on leaving the hospital contrary to the wishes of his attendants, on the 14th of March. After his return home, it appears he commenced bending his leg at once, and met with some accident, by which the union between the fragments was entirely broken up, and they are now between two and three inches apart, without any intervening ligament. He is again in the hospital for the purpose of having something done for his relief.

No. 6. This is a case of compound fracture, which was admitted on the 25th of March, 1835, and still continues in the hospital under treatment. If any union has taken place, (June 6th,) it is very slight. The details of this very interesting case will probably be soon given to the profession from another source.

The above six cases of fracture of the patella are all that occurred to the writer during a residence of two years in the Pennsylvania Hospital, and were all he believes that were received during that period. The comparative frequency of the accident appears to have been greater than has usually occurred in that institution, as many months not unfrequently elapse without there being a single specimen in the wards, where cases of fracture are always numerous. During the two years ending in April, 1835, two hundred and forty cases of fracture were under treatment, of these six were of the patella, or one in forty. Of these six, two occurred in the same individual; three were in males and three in females. Three were produced by muscular action alone, two from a fall upon the part, and that of compound fracture by a piece of rock thrown against the knee from an explosion.

Tetanus.—In copying for publication the report of the case of tetanus in the last number of this journal, an omission occurred which the writer takes this opportunity to supply. The plan of treatment adopted in that case is one which has been used successfully in several instances by Dr. Harris, to whom we believe the profession is indebted for its introduction in this city, and under whose direction as attending surgeon of the hospital, the treatment was conducted in the case to which we have just referred.

One other case has occurred to the writer since that which he has reported; it did not come under his care till many hours after the attack, and in a very unfavourable subject; yet the value of the plan in arresting the progress of the disease was fully manifested, although the case did not terminate favourably. The patient was a coloured man, eighty-nine years of age, and as might be expected, feeble; he had an extensive and unhealthy looking ulcer on the leg, but knew no cause for the present attack, unless it was exposure to cold. He had been indisposed one week previous to his admission into the hospital; the rigidity of his jaws had been noticed for three days, and he had had spasms for twenty-four hours, with severe pain at the epigastrium, and constipated bowels for four days before his entrance, at which time his jaws were permanently closed, and the spasms recurred nearly every half minute, affecting most of the voluntary muscles. His pulse was 100, regular, and of moderate strength, and his skin cool and moist; ℥xxv. of blood was taken from over the spine by cups, and a blister extending from the occiput to the sacrum, applied immediately afterwards. A stimulating injection to open his bowels. At 10, P. M. he commenced the use of opiates, taking tr. opii, gtt. c. every two and a half hours. He slept but little during the night, but after taking the second dose, his spasms, although of equal violence, diminished very much in frequency, and in the interval he was able to open his mouth, so as to admit a spoon. He suffered but little pain at the epigastrium.

The same treatment was continued till 10 o'clock next morning, after which he took no opiate. During the two hours previous to this, he had had but two slight spasms, and expressed himself much better in every respect. Up to 2, P. M. he had one spasm, so slight as scarcely to be noticed, and all his symptoms were favourable; his pulse was 88, full and regular; skin warm and moist; he suffered no pain; slept most of the time, but was easily roused when spoken to.

The treatment had produced results so exactly as was desired, that hopes were now indulged of his recovery. At 2½, P. M. however, he had a violent convulsion; his pulse after it was 120, quick; respiration slightly stertorous; puffing of the cheeks, and a cool skin. At 4 o'clock he had another of the same character, and died a quarter of an hour afterwards. The autopsy was made eighteen hours after death. The brain was moist, pale, and of unusual firmness. Slight effusion existed in the arachnoid of the spinal marrow; no injection; medulla firm, rather more perhaps than is usual; other parts normal. Upwards of ℥iv. of fluid blood was removed from the cavity, made in cutting down to the spine, probably the result of the free cupping over the part.